ABSTRACT OF THE DISCLOSURE

A jet of water in a cylindrical form is supplied from a jet nozzle onto a measurement surface of a substrate to form a column of the water extending between the nozzle and the measurement surface. Light is emitted from an irradiation fiber and transmitted through the column of water to the measurement surface. The light reflected by the measurement surface is received by a light-receiving fiber through the column of water. A measurement calculation unit measures the thickness of a film formed on the substrate, based on the intensity of the reflected light.